

## CLAIMS

What is claimed is:

- 5     1. A universal swing practice apparatus for use by a user swinging a club having a light source attached thereto, comprising:

        a mat configured to be placed on a ground surface so as to have an upwardly-facing surface;

        multiple foot position demarcations formed on the upwardly-facing surface so as to  
10     represent the user's stance upon the mat;

        multiple ball position demarcations formed on the upwardly-facing surface substantially opposite of the foot position demarcations so as to represent the location of a ball relative to the user swinging the club and standing upon the mat at the location of the foot position demarcations; and

15     at least one swing zone demarcation formed on the upwardly-facing surface offset from the foot position demarcations and the ball position demarcations so as to represent an optimal path of light originating from the light source when the club is swung by the user, whereby the apparatus is configured to accommodate users of varying sizes and stances and clubs of varying lengths and to provide to such users visual feedback of the club position at  
20     defined swing positions, enabling such users to assess and improve swing mechanics.

25     2. The apparatus of claim 1 wherein the swing zone demarcation terminates at a first end substantially adjacent to the ball position demarcations and terminates at a second end substantially adjacent to the foot position demarcations.

3. The apparatus of claim 2 wherein the swing zone demarcation comprises:

        a substantially linear full-swing demarcation originating at the first end and extending away from and substantially perpendicular to the ball position demarcations, the full-swing demarcation being configured to enable the optimal path of light to track within the full-

swing demarcation at a top position of a mechanically sound swing of the club by the user, the top position being defined by the location of the club during the swing substantially over the head of the user such that the club is substantially parallel to the ground surface;

5 a substantially linear mid-swing demarcation originating at the second end and extending away from the foot position demarcations substantially parallel with the full-swing demarcation, the mid-swing demarcation being configured to enable the optimal path of light to track within the mid-swing demarcation at a midway position of the swing, the midway position being defined by the location of the club during the swing substantially at the waist-height of the user such that the club is substantially parallel to the ground surface; and

10 a substantially arcuate high-swing demarcation originating at the first end along with the full-swing demarcation and extending away from the ball position demarcations along a curve so as to intersect the mid-swing demarcation, the high-swing demarcation being configured to enable the optimal path of light to track within the high-swing demarcation as the club is shifted between the midway position and the top position of the swing.

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4. The apparatus of claim 3 wherein the swing zone demarcation further comprises a low-swing demarcation originating substantially adjacent to the foot position demarcations and extending away from the foot position demarcations at an angle relative to both the full-swing demarcation and the mid-swing demarcation so as to intersect the high-swing demarcation, the low-swing demarcation being configured to enable the optimal path of light to track within the low-swing demarcation as the club is shifted between a setup position and the midway position of the swing.

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5. The apparatus of claim 3 wherein the swing zone demarcation further comprises a setup demarcation extending between the foot position demarcations and the ball position demarcations so as to be substantially collinear with the ball position demarcations, the setup demarcation being configured to enable the optimal path of light to track within the setup demarcation at a setup position of the swing, the setup position being defined by the location of a distal end of the club adjacent to the ball position demarcations.

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6. The apparatus of claim 1 wherein the foot position demarcations comprise a left foot demarcation and a right foot demarcation.
- 5 7. The apparatus of claim 6 wherein the right foot demarcation is configured with multiple substantially parallel outside edge lines, whereby the user positions the left foot within the left foot demarcation and the right foot within the right foot demarcation such that the outside edge of the right foot is positioned against a select one of the outside edge lines so as to have a comfortable stance upon the mat with the feet substantially  
10 shoulder-width apart.
8. The apparatus of claim 6 wherein:  
the ball position demarcations are arranged substantially linearly so as to define a swing axis extending through the ball position demarcations and passing between the left foot  
15 demarcation and the right foot demarcation;  
the left foot demarcation is rotated counter-clockwise from the swing axis so as to be at an angle thereto; and  
the right foot demarcation is rotated clockwise from the swing axis so as to be at an angle thereto, whereby the feet of the user when placed within the foot position demarcations  
20 are comfortably oriented as the user swings the club.
9. The apparatus of claim 6 wherein the swing zone demarcation comprises:  
a substantially linear setup demarcation extending from the ball position demarcations so as to be substantially collinear with the ball position demarcations and to pass between the  
25 left foot demarcation and the right foot demarcation substantially adjacent to the left foot demarcation, the setup demarcation being configured to enable the optimal path of light to track within the setup demarcation at a setup position of a mechanically sound swing of the club by the user, the setup position being defined by the location of a distal end of the club adjacent to the ball position demarcations;

a substantially linear low-swing demarcation originating substantially adjacent to the right foot demarcation and extending away from the right foot demarcation at an angle relative to the setup demarcation, the low-swing demarcation being configured to enable the optimal path of light to track within the low-swing demarcation as the club is shifted from the setup position; and

a substantially arcuate high-swing demarcation originating substantially adjacent to the ball position demarcations and extending away from the ball position demarcations along a curve, the high-swing demarcation being configured to enable the optimal path of light to track within the high-swing demarcation as the club is shifted further from the setup position.

10. The apparatus of claim 1 wherein the ball position demarcations comprise multiple ball demarcations spaced along a swing axis.

11. The apparatus of claim 10 wherein:

the foot position demarcations define a left foot demarcation and a right foot demarcation and a foot axis therebetween;

the swing axis is substantially perpendicular to the foot axis such that the ball demarcations are arranged so as to be progressively further from the user, whereby users of differing sizes and stances and selecting differing club lengths may stand within the foot position demarcations and hold the club as in a setup position having a distal end thereof adjacent to a selected one of the ball demarcations.

12. The apparatus of claim 10 wherein the ball demarcations are defined by hash marks.

13. The apparatus of claim 1 wherein the swing zone demarcation defines a swath at least four inches wide.

14. A universal swing practice apparatus for use by a user swinging a club having a light source attached thereto, comprising:

a mat configured to be placed on a ground surface so as to have an upwardly-facing surface;

at least one foot position demarcation formed on the upwardly-facing surface so as to represent the user's stance upon the mat;

at least one ball position demarcation formed on the upwardly-facing surface substantially opposite of the foot position demarcation so as to represent the location of a ball relative to the user swinging the club and standing upon the mat at the location of the foot position demarcation;

a substantially linear full-swing demarcation extending away from the ball position demarcation, the full-swing demarcation being configured to enable an optimal path of light originating from the light source when the club is swung by the user to track within the full-swing demarcation at a top position of a mechanically sound swing, the top position being defined by the location of the club during the swing substantially over the head of the user such that the club is substantially parallel to the ground surface;

a substantially linear mid-swing demarcation extending away from the foot position demarcation substantially parallel with the full-swing demarcation, the mid-swing demarcation being configured to enable the optimal path of light to track within the mid-swing demarcation at a midway position of the swing, the midway position being defined by the location of the club during the swing substantially at the waist-height of the user such that the club is substantially parallel to the ground surface; and

a substantially arcuate high-swing demarcation interconnecting the full-swing demarcation and the mid-swing demarcation, the high-swing demarcation being configured to enable the optimal path of light to track within the high-swing demarcation as the club is shifted between the midway position and the top position of the swing, whereby the mid-swing demarcation, the high-swing demarcation and the full-swing demarcation cooperate to form on the upwardly-facing surface swing zone demarcations representative of the optimal path of light originating from the light source when the club is swung by the user, the

apparatus being thus configured to accommodate users of varying sizes and stances and clubs of varying lengths and to provide to such users visual feedback of the club position at defined swing positions, enabling such users to assess and improve swing mechanics.

- 5 15. A method of practicing and analyzing the swinging of a swing object, comprising the steps of:
- placing a universal swing practice mat on a ground surface;
  - standing on the mat within foot position demarcations provided thereon;
  - swinging the swing object over the mat; and
  - 10 analyzing the positioning of the swing object by observing a light projection from the swing object within swing zone demarcations provided on the mat.

16. The method of claim 15 comprising the further steps of:
- holding the swing object in a setup position over the mat such that a distal end of the
  - 15 swing object is substantially adjacent to ball position demarcations provided on the mat opposite the foot position demarcations; and
  - analyzing the positioning of the swing object in the setup position by observing the light projection from the swing object within a setup demarcation provided on the mat.

- 20 17. The method of claim 16 comprising the further steps of:
- shifting the swing object spatially up and away from the setup position as in a back swing to a low-swing position;
  - analyzing the positioning of the swing object in the low-swing position by observing the light projection within a low-swing demarcation provided on the mat;
  - 25 shifting the swing object beyond the low-swing position to a mid-swing position defined by the waist-high position of the swing object substantially parallel to the ground surface;
  - analyzing the positioning of the swing object in the mid-swing position by observing the light projection within a mid-swing demarcation provided on the mat;
  - shifting the swing object beyond the mid-swing position to a high-swing position;

analyzing the positioning of the swing object in the high-swing position by observing the light projection within a high-swing demarcation provided on the mat;

shifting the swing object beyond the high-swing position to a top-swing position defined by the overhead position of the swing object substantially parallel to the ground surface; and

5 analyzing the positioning of the swing object in the top-swing position by observing the light projection within a top-swing demarcation provided on the mat.

18. The method of claim 15 comprising the further steps of:

shifting the swing object to a mid-swing position defined by the waist-high position of  
10 the swing object substantially parallel to the ground surface;

analyzing the positioning of the swing object in the mid-swing position by observing the light projection within a mid-swing demarcation provided on the mat;

shifting the swing object beyond the mid-swing position to a high-swing position;

analyzing the positioning of the swing object in the high-swing position by observing the  
15 light projection within a high-swing demarcation provided on the mat;

shifting the swing object beyond the high-swing position to a top-swing position defined by the overhead position of the swing object substantially parallel to the ground surface; and

analyzing the positioning of the swing object in the top-swing position by observing the light projection within a top-swing demarcation provided on the mat.

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19. The method of claim 18 comprising the further steps of:

shifting the swing object from the top-swing position back through each of the swing positions so as to perform a forward swing;

analyzing the positioning of the swing object at each of the swing positions by observing  
25 the light projection from the swing object in each of the respective demarcations provided on the mat;

shifting the swing object past the mid-swing position to a low-swing position;

analyzing the positioning of the swing object in the low-swing position by observing the light projection within a low-swing demarcation provided on the mat;

stopping the swing object in a contact position over the mat such that a distal end of the swing object is substantially adjacent to ball position demarcations provided on the mat opposite the foot position demarcations; and

analyzing the positioning of the swing object in the contact position by observing the  
5 light projection from the swing object within a contact demarcation provided on the mat.

20. A method of practicing and analyzing the swinging of a swing object, comprising the steps of:

placing a universal swing practice mat on a ground surface;

10 standing on the mat within foot position demarcations provided thereon;

holding the swing object in a setup position over the mat such that a distal end of the swing object is substantially adjacent to ball position demarcations provided on the mat opposite the foot position demarcations;

analyzing the positioning of the swing object in the setup position by observing a light  
15 projection from the swing object within a setup demarcation provided on the mat;

shifting the swing object spatially up and away from the setup position as in a back swing to a low-swing position;

analyzing the positioning of the swing object in the low-swing position by observing the  
light projection within a low-swing demarcation provided on the mat;

20 shifting the swing object beyond the low-swing position to a mid-swing position defined by the waist-high position of the swing object substantially parallel to the ground surface;

analyzing the positioning of the swing object in the mid-swing position by observing the  
light projection within a mid-swing demarcation provided on the mat;

shifting the swing object beyond the mid-swing position to a high-swing position;

25 analyzing the positioning of the swing object in the high-swing position by observing the  
light projection within a high-swing demarcation provided on the mat;

shifting the swing object beyond the high-swing position to a top-swing position defined  
by the overhead position of the swing object substantially parallel to the ground surface;



analyzing the positioning of the swing object in the top-swing position by observing the light projection within a top-swing demarcation provided on the mat; and

shifting the swing object back through each of the swing positions so as to perform a forward swing, again analyzing the positioning of the swing object at each of the swing  
5 positions by observing the light projection from the swing object in each of the respective demarcations provided on the mat.